

WHAT IS CLAIMED IS:

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1. A delay time adjusting method of  
adjusting a delay time of an input signal so that a  
phase of said input signal and a phase of an output  
signal match each other, the method comprising the  
10 step of:

delaying said phase of said output signal  
until a phase difference between said phase of said  
input signal and said phase of said output signal  
becomes N periods, where N is an integer other than  
15 zero.

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2. The delay time adjusting method as  
claimed in claim 1, further comprising a step of  
producing said output signal by delaying said input  
signal by a DLL circuit.

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3. A delay time adjusting method of  
adjusting a delay time of an input first periodic  
30 signal so that a phase of said input first periodic  
signal and a phase of an output second periodic  
signal match each other, the method comprising the  
step of:

adjusting said delay time so that, when a  
35 phase of a predetermined rising edge of said output  
second periodic signal is behind a phase of a  
predetermined rising edge of said input first

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periodic signal, said predetermined rising edge of said output second periodic signal matches a rising edge of said input first periodic signal, a phase of the rising edge being behind and nearest to said 5 phase of said predetermined rising edge of said output second periodic signal.

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4. A delay time adjusting method of adjusting a delay time of an input first periodic signal so that a phase of said input first periodic signal and a phase of an output second periodic 15 signal match each other, the method comprising:  
a first step of judging whether a phase of a predetermined rising edge of said output second periodic signal is behind a phase of a first rising edge of said input first periodic signal; and  
20 a second step of delaying said phase of said output second periodic signal so that, when said phase of said predetermined rising edge is judged to be behind said phase of said first rising edge in said first step, said phase of said predetermined rising edge and a phase of a second 25 rising edge of said input first periodic signal match each other, the second rising edge being one period behind said first rising edge.

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5. A delay time adjusting circuit for adjusting a delay time of an input signal so that a 35 phase of said input signal and a phase of an output signal match each other, the circuit comprising:  
detecting means for detecting a phase

difference between said phase of said input signal and said phase of said output signal; and  
delaying means for delaying said phase of said output signal until said phase difference  
5 becomes N periods, where N is an integer other than zero.

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6. A delay time adjusting circuit for  
adjusting a delay time of an input first periodic  
signal so that a phase of said input first periodic  
signal and a phase of an output second periodic  
15 signal match each other, the circuit comprising:  
judging means for judging whether a phase  
of a predetermined rising edge of said output second  
periodic signal is behind a phase of a predetermined  
rising edge of said input first periodic signal; and  
20 delaying means for adjusting said delay  
time so that, when said phase of said predetermined  
rising edge of said output second periodic signal is  
judged to be behind said phase of said predetermined  
rising edge of said input first periodic signal by  
25 said judging means, said predetermined rising edge  
of said output second periodic signal matches a  
rising edge of said input first periodic signal, a  
phase of the rising edge being behind and nearest to  
said phase of said predetermined rising edge of said  
30 output second periodic signal.

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7. A delay time adjusting circuit for  
adjusting a delay time of an input first periodic  
signal so that a phase of said input first periodic

signal and a phase of an output second periodic signal match each other, the circuit comprising:  
delaying means for delaying said input first periodic signal so as to generate said output  
5 second periodic signal;

phase-detecting means for detecting whether a phase of a predetermined rising edge of said output second periodic signal is behind a phase of a first rising edge of said input first periodic  
10 signal; and

adjusting means for controlling said delaying means so that, when said phase of said predetermined rising edge is judged to be behind said phase of said first rising edge by said phase-  
15 detecting means, said delaying means delays said phase of said output second periodic signal until said phase of said predetermined rising edge and a phase of a second rising edge of said input first periodic signal match each other, the second rising  
20 edge being one period behind said first rising edge.

25 8. The delay time adjusting circuit as claimed in claim 7, wherein said adjusting means controls said delaying means so that, after said phase of said predetermined rising edge and said phase of said second rising edge match each other,  
30 said phase of said predetermined rising edge and said phase of said second rising edge match each other all the time within a tolerable range.